ORIGINAL ARTICLES

A CASE OF LEPROSY IN SAN FRANCISCO PREVIOUSLY UNDISCOVERED.*

By WILLIAM FITCH CHENEY, M. D., San Francisco.

A boy came to the Medical Clinic of Cooper Medical College, January 29, 1910, complaining of swelling in his face, hands and feet, and of sores on his legs. The condition resembled one of myxedema, and he was sent into the ward of Lane Hospital with that as the probable diagnosis. At the hospital the following history was elicited:

Family History. He said his parents were both living and well, but we were never able to see or examine them. He had had fifteen brothers and sisters, of whom ten were living and well, the others dying in infancy. While he was in the hospital one of his brothers came to see him, and although we had no opportunity to examine this brother, his facial appearance was observed to be very much like that of the patient.

Past History. The boy was 18 years old. He was born in Mazatlan, Mexico, and had lived there until he was seven, then coming to San Francisco with his parents, where he had lived continuously ever since. Since he was ten he had worked in an art glass factory, until recently his illness had incapacitated him. The patient always had good health until three years before presenting himself. He never used alcohol or tobacco and denied all venereal infection.

Present Illness. Three years before the boy began to feel tired and lazy and lost all ambition for work. He noticed that whenever he perspired, his face would become covered here and there with red spots, which would remain for an hour or two before fading away. Two years ago his right shin developed running sores and became swollen. A little later the left shin acquired the same condition. These sores would partly heal and then would relapse and had never entirely disappeared since they began. About this same time his face and hands became swollen and had remained so ever since. At times his face seemed to be more swollen than at others. His fingers felt stiff and clumsy, and this had finally made him unable to do his work. His hair had become very dry and thin, and his eyebrows and eyelashes had gradually fallen out. His appetite was good and he had gained about twelve pounds in weight during the three years of his illness.

Physical Examination. The patient's face (see Fig. 1) appeared swollen and puffy, so that his eyes were small and his malar prominences exaggerated. There were no eyebrows present and no eyelashes. Although the subcutaneous tissues appeared edematous, there was no pitting on pressure. The nose was flat and broad, the nostrils and upper lip red and inflamed. The lips were thick and everted, but showed no lesions. The lobes of the ears were likewise thick and apparently swollen. The tongue was clean; the teeth regular and showed no Hutchinson abnormality; the gums showed a yellowish discharge along the junction with the teeth and bled easily on pressure, but were not swollen or spongy. The pharynx showed no abnormality. The hair over the scalp was dry and the scalp showed thick scales of dandruff. The neck showed no enlarged cervical glands. There was no visible or palpable abnormality in the thyroid. The hands were apparently swollen, but did not pit on pressure. They were short, broad, stubby, and the normal contour on dorsum and palm was entirely destroyed. The fingers were thick, clumsy and stiff. The skin over them, as over the rest of the body, was dry, scaly and glistening.

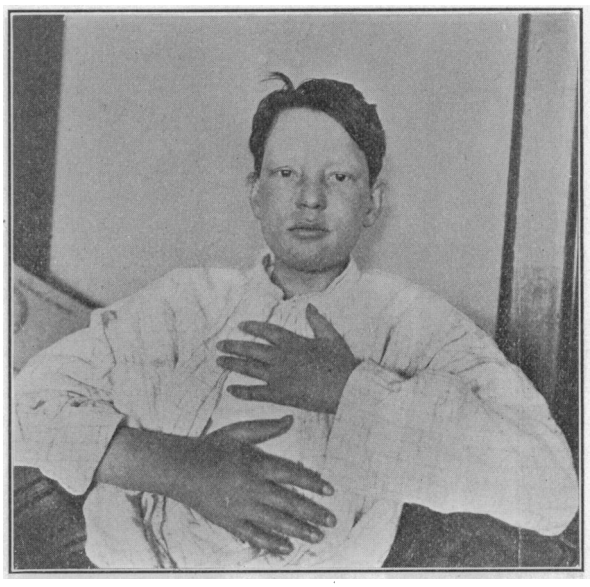

Figure 1.

There was no abnormality in contour of the chest, the sides moved equally, there was no percussion dullness over either lung, anteriorly or posteriorly, and the breath sounds were normal throughout. The heart showed a diffuse impulse, visible in the second, third, fourth and fifth intercostal spaces, between the sternum and the nipple line; the left border of dullness was found in the nipple line, the right border at the right border of the sternum, the upper border at the upper border of the third rib; a systolic murmur was heard at all parts of the heart, but loudest at the base, over the pulmonic area; the second sound was everywhere clear.

The abdomen showed no abnormality in contour. The liver dullness measured 9 centimetres in the nipple line. The spleen was decidedly enlarged, its area of dullness in the anterior axillary line measuring 13 centimetres and its lower edge being distinctly palpable 3 c.m. below the costal margin. The abdomen otherwise was negative.

Genitalia. There was no pubic hair present. The penis and testicles were small, undeveloped and infantile in type.

* Read before the Cooper College Science Club, February, 1910.

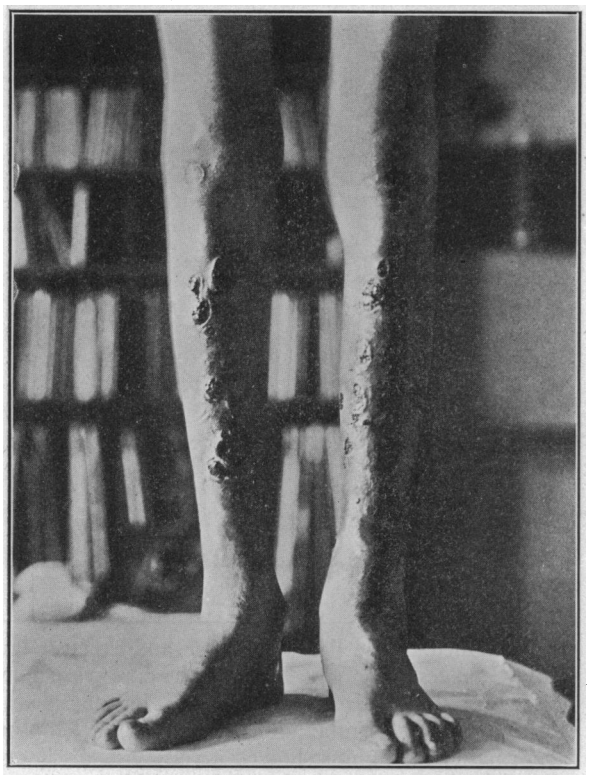

Figure 2.

Lower Extremities. (See Fig. 2.) Over the right leg, between knee and ankle, were numerous ulcerations with granulating base; about the knee were several scars of healed lesions, one the size of a dime, comparatively recent, purplish red in color; other smaller scars, evidently older, were white; the fresh ulcers were particularly along the crest of the tibia and the skin between them was everywhere scaly, covered with crusts and showed remnants of an ointment recently applied; one of the ulcers was as large as a quarter dollar, but most about the size of a dime; all the fresh ulcers showed exuberant granulations and all seemed exquisitely tender. The left leg showed a condition very similar to that of the right, with numerous fresh ulcerations and healed scars of older ones, all lying along the tibial crest and about the internal and external malleoli. The feet appeared swollen and thickened like the hands, but showed no edema and no ulcerations.

Nervous System. There was no loss of superficial or deep reflexes; no anesthetic areas could be found anywhere over the body; there was no loss of power; and there was no pain except when the ulcers were touched.

Diagnosis. With such subjective and objective evidence the interpretation of its meaning presented only three possibilities: myxedema, syphilis, and leprosy. In favor of myxedema was the appearance of the face and hands, which seemed almost diagnostic; the dry scaly skin and scanty hair; and the condition of infantilism, both physical and mental. But at the first examination it was clear that the case must nevertheless be something more than myxedema, because of the enlarged spleen and the ulcers on the legs, for which atrophy of the thyroid gland could in no way account. As regards syphilis, the ulcers along the tibiæ appeared characteristic of the disease, and there was a positive Wasserman reaction to give further support to such a diagnosis. But there was no history of primary or secondary lesions; no marks were found to speak for such previous lesions; no spirochetæ could be found in scrapings from the leg ulcers; and syphilis would not explain the remarkable appearance of the face and hands. In favor of the diagnosis of leprosy, the facial appearance of leontiasis, the absence of eyebrows and eyelashes, the red and irritated nostrils and upper lip, the rough, dry and scaly skin, the enlarged spleen, the infantile genitalia and lack of pubic and axillary hair, the chronic ulcerations on the legs—all spoke most positively. The Wasserman reaction was not inconsistent with leprosy, for it may be found in this disease as well as in syphilis. Finally, smears from the nasal secretion showed lepra bacilli in abundance and by this means the positive diagnosis was made.

With the diagnosis thus definitely proven, some other findings during the observation and study of the case become of interest. The body temperature showed a range from 98° each morning to 99° or 99.8° each afternoon, a low grade of fever such as would be expected with a chronic infection. The blood showed: hemoglobin 60 per cent; red corpuscles 5,000,000; white corpuscles, 16,000; polymorphonuclears 65 per cent, small mononuclears 20, large mononuclears 2, Eosinophiles 12, basophiles 1; another count made several days afterwards by a different observer gave practically the same figures. The urine always showed a light cloud of albumen, with a few pus corpuscles and transitional epithelial cells; but no casts and no blood. X-ray plates showed a normal condition of the bones in hands and feet.

The report from the Nose and Throat Clinic on the patient's condition was as follows: "Pharynx normal; tonsils small, irregular, buried; nasopharynx shows a small adenoid, partly blocking both sides; posterior end of both turbinates large; on right side, passage is small but open; on left side, passage is entirely blocked; mucous membrane of posterior nares is clean, of good color and shows no ulceration; anterior nares blocked with blood clots; no perforation of septum; on both sides of the septum the mucous membrane is roughened, either from ulceration or crusting; the middle and superior turbinates on the left side are practically gone; the middle turbinate on the right side is nearly gone; the inferior turbinates are hypertrophied; no evidence of active ulceration."

As soon as the diagnosis of leprosy was made, the boy was sent to the Detention Hospital, where he now makes his home with others of his kind, under the care of the city.

Discussion.

Dr. D. W. Montgomery, discussing:

There are several interesting points about this case. One is the occurrence of that preliminary mottled erythema of the face. These preliminary erythemas are very interesting in leprosy. They may precede by a long time the outburst of the more serious forms of the disease. Sometimes, I believe, they constitute the whole extent of the leprosy. That is to say, a man will get an erythematous lepride and stop at that. This erythematous lepride sometimes consists of only one spot. I recall, in this regard, a young man who had but two spots of erythema,—one an anesthetic area on the cheek, and another raised, red anesthetic spot on the right forearm. From the spot on the right forearm there developed an infiltration of a nerve; the infiltration extending, as is usual in leprosy, from the periphery toward the center. This infiltrated nerve cord was one of the branches of the radial nerve, and was whipcord-like and somewhat nodular. That boy was given salol for a long time and the symptoms decreased; it would not be surprising if they had disappeared entirely. One of the Bint boys had this form of erythema only. The boy is living and well to-day, and that was eighteen or nineteen years ago. His mother had an erythematous lepride of the face, and that was all she ever manifested. In the Chinese quarters of the Almshouse a few years ago they often gave the history of an erythematous lepride long preceding the outbreak of the more serious forms of the disease. There is, sometimes, in some cases, a generalized erythematous eruption all over the body, simulating an urticaria. That was exemplified in a Swede in the Almshouse who got his leprosy in the Hawaiian Islands, and then went back to Portland, and from there to Paso Robles, to get rid of a supposed urticaria, which turned out to be a lepride. There were "peacock eyes" all over the skin. He looked as if he had been tatooed.

The infection or inoculation of leprosy precedes usually, I am convinced, a long, long time the outbreak of symptoms that attract serious attention, and in the case in hand the fact that the patient came from Mazatlan is presumptive evidence that he got his disease there. It is more likely that he got it there than that he developed it here, although I know of a case where the disease developed here. This was the case of an Irish woman, the only case I know of where leprosy undoubtedly was acquired and developed in this city.

Among the Chinese there are frequent cases that have been quite a long time, often several years, in San Francisco before the disease develops, but in all those cases I have examined there was a previous residence in China, and therefore the possibility, even probability, that their malady really had its inception during their residence in China. All the Chinese whom I have examined on this point have come from the See Yup or Sam Yup villages on the right bank of the West River, where leprosy is prevalent. All of them, without exception, have come from that particular locality. They generally gave the history of having had some red spot that was dead, anesthetic, and then getting a solid edema, such as there is in this case, and after that the leprous nodules. The skin of the legs in lepers has a tendency to become smooth and to be cut up into lozenge-shape areas, and to become darkened and very thin, and easily lesionable, and these people can easily get an eczema or ulcers. That is explained by the lack of nutrition. That peculiarity of the legs is a very striking one. The soles also become dry.

Hansen has said that the ordinary quarantine established by the European in ordinary life is sufficient to prevent any inoculation whatever. The ordinary segregation of towels and washing is sufficient to form a barrier that the leprous infection cannot get over. The only country in the world where the better classes have leprosy is, I believe, Brazil. Very few of the Norwegian lepers who came to Minnesota transmitted the disease to their offspring; as soon as they got into better quarters, leprosy disappeared.

Dr. Alvarez: The confounding of myxedema and leprosy is certainly pardonable. It has been known for many years that the lesions of leprosy can sometimes be cleared up almost entirely with thyroid extract.

Walter Brinckerhoff has lately published the results of a careful examination of the nasal mucous membrane and secretions in some 407 Hawaiians. The investigation was taken in the hope that a means of earlier diagnosis might be found. He was disappointed, however, as the percentage of positive findings in early cases was very low. He and others have found acid-fast bacilli in the noses of non-leprous patients, so we must demand their presence in considerable numbers and characteristic grouping before a positive diagnosis is made. The suggestive Wasserman reaction in this case is not strange considering the several points of similarity in the infections granulomata. A large proportion of lepers react to tuberculin.

Dr. Oliver: I examined the sores in this case and was unable to find any lepra bacilli or spirochetae pallida present. The nasal discharge showed plenty of lepra bacilli which were quite characteristic in morphology. The Wasserman reaction was what we might call nearly positive; that is, there was a slight hemolysis. If these ulcers had been syphilitic the Wasserman would have been positive.

Dr. Herbert Gunn: Regarding what Dr. Alvarez has said concerning the Moro and Wasserman tests, tuberculosis and syphilis very frequently occur with leprosy. With regard to the skin lesions of the leg, I have seen them repeatedly and they usually start in with an eruption of bullae. The bullae appear and the lesions may then ulcerate, but generally dry up and disappear. Frequently, however, they go on to considerable ulceration; usually they are hypersensitive as in this case. So far as the boy having contracted the disease here, I should imagine that he got it in Mazatlan, because frequently cases do not develop for eight or nine years after infection. Furthermore this boy probably had symptoms for some time before attention was called to them. He probably had an erythematous eruption which may have occurred many years ago. The period of incubation would therefore not be over six or seven years. Dr. Clark asked a question with regard to the puffiness present here and the nodular appearance. Following the erythematous condition very frequently we have a thickening of the entire skin, so we have just this appearance of puffiness without there being any nodules present at all. In fact from his appearance I should not call him a case of nodular leprosy but a case of skin leprosy.